

IN THE CLAIMS:

1. (currently amended) A method of polishing a layer of a substrate, comprising:

~~providing a polishing apparatus adapted to impart relative movement between a polishing pad and a substrate having a first layer to be polished;~~

~~providing a liquid medium having a pH between 4 and 11 to an interface between said a first layer of a substrate and said a polishing pad, said liquid medium including a pH controlling substance including at least one of an acid and a base, and further including a carbonate, and a stabilizer additive comprising including at least one acid selected from the group consisting of amino acids and polyacrylic acid; and~~

~~polishing said first layer of said substrate by moving at least one of moving said substrate relative to and said polishing pad relative to said other of said substrate and or moving said polishing pad relative to said substrate to polish said layer of said substrate.~~

2. (currently amended) The method of claim 1 wherein said pH controlling substance is a base, and said stabilizer additive includes at least one amino acid selected from the group consisting of amino acids, and said first layer includes said polishing method being applied to polishing an oxide layer.

3. (currently amended) The method of claim 2 wherein said polishing is performed with a polishing pad having includes a fixed abrasive.

4. (withdrawn) The method of claim 1 wherein said pH controlling substance is an acid, -said pH of said liquid medium ranges between about 4.2 and about 5, and-said stabilizer additive includes polyacrylic acid, and said first layer includes said method being applied to polish an oxide layer.

5. (currently amended) The method of claim 2-1 wherein said pH controlling substance is a base, -said pH is adjusted to a range between 9.5 and 12, and said stabilizer additive includes an amino acid is further selected from the group consisting of amino acids.

6. (currently amended) The method of claim 3 wherein said stabilizer additive is selected from the group consisting of L-proline, glycine, and lysine and polyacrylic acid..

7. (currently amended) The method of claim [4-]5 wherein said base includes a hydroxide of an alkali earth metal.

8. (currently amended) The method of claim [4-]5 wherein said base is selected from the group consisting of hydroxides of alkali earth metals and ammonium hydroxide.

9. (currently amended) The method of claim 5-8 wherein said carbonate includes a carbonate salt of said alkali earth metal.

10. (currently amended) The method of claim 5-9 wherein said base includes potassium hydroxide and said carbonate salt includes potassium carbonate.
11. (currently amended) The method of claim 6-9 wherein said carbonate is provided in said liquid medium by adding said carbonate salt to said liquid medium.
12. (currently amended) The method of claim 3 wherein said fixed abrasive component of said polishing pad includes at least one of alumina, and ceria.
13. (original) The method of claim 12 wherein said polishing pad is moved in a linear direction relative to said substrate.
14. (currently amended) The method of claim 3 wherein said step of moving is performed to polish said first layer of said substrate until polishing is performed to expose a second layer underlying said first layer is exposed.
15. (currently amended) The method of claim 14 wherein said first layer comprises an oxide of silicon, said second layer comprises silicon nitride and said step of moving polishing is performed until said first layer is planarized to a level of said second layer.

16. (currently amended) A chemical mechanical polishing method of planarizing an oxide layer of a semiconductor substrate, comprising:

providing a semiconductor substrate having an underlying layer and an exposed oxide layer having at least one of a step height difference above said underlying layer and or an uneven overfill above an-said underlying layer;

contacting said exposed oxide layer of said substrate with a fixed abrasive pad;

providing a liquid medium having a pH between about 9.5 and 12 to an interface between said exposed oxide layer of said substrate and said fixed abrasive pad, said liquid medium including a base selected from the group consisting of hydroxides of alkali earth metals and ammonium hydroxide, and said liquid medium further including a carbonate and a stabilizer additive comprising at least one acid selected from an amino acid and polyacrylic acid; and

polishing said exposed oxide layer by moving at least one of moving said substrate relative to and said fixed abrasive pad relative to said other of said substrate and or moving said fixed abrasive pad relative to said substrate.

17. (currently amended) The method of claim 16 wherein said stabilizer additive is selected from the group consisting of L-proline, glycine, and-lysine and polyacrylic acid.

18. (currently amended) The method of claim 17 wherein said exposed oxide layer includes material formed in trenches within said underlying layer, such that said polishing is performed to planarize said oxide layer to remove said step height differencesdifference and said uneven overfill above said second layer.

19-21. (cancelled)